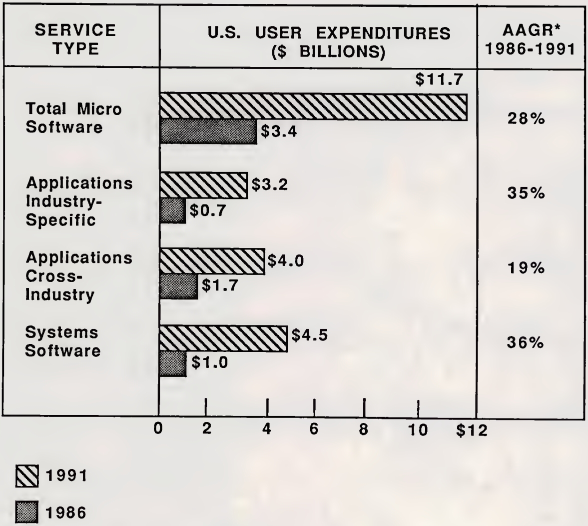
EXHIBIT II-16

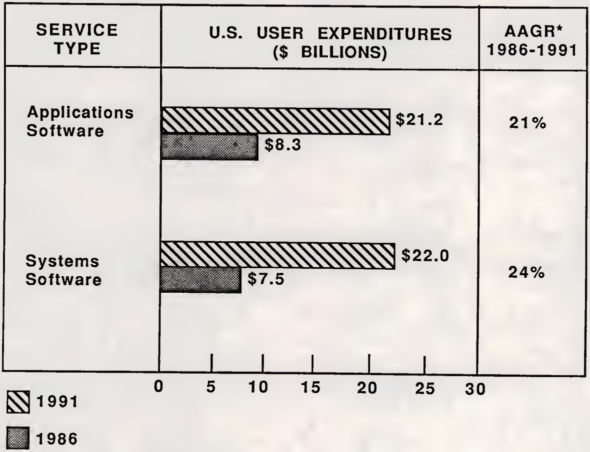
STRONG MICRO SOFTWARE MARKET 1986-1991



* AAGR = Average Annual Growth Rate

EXHIBIT II-13

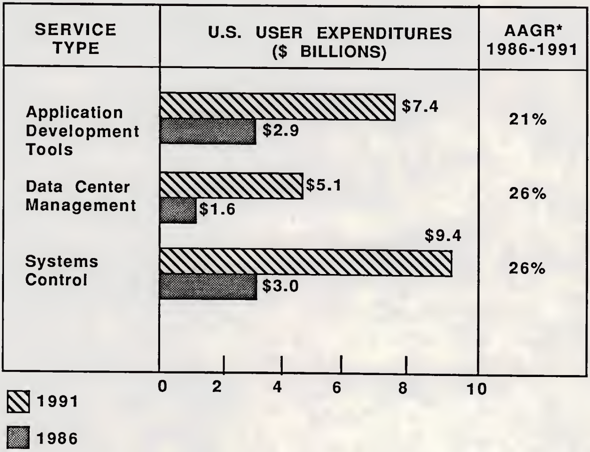
SOFTWARE PRODUCTS MARKETS



* AAGR = Average Annual Growth Rate

EXHIBIT II-17

TOTAL SYSTEMS SOFTWARE MARKET BY SOFTWARE TYPE 1986-1991



* AAGR = Average Annual Growth Rate

INPUT®

INDUSTRY DIRECTIONS AND FORECASTS, U.S.

Bonnie Digrius
Senior Consultant
INPUT

1 JJJJ BD S (s) 1

[illegible]

INPUT®

CONTENTS

RESEARCH BASE

Primary Research

- Vendor Interviews/Analysis
  - Over $10 Million
  - Under $10 Million

- Buyer Interviews/Analysis
  - IS Manager Surveys
  - Specialized Surveys

Secondary Research

FORECAST PARAMETERS

- Current Dollars
- GNP - Steady Growth
- Inflation Assumptions:

- 1986: 2%	- 1989: 5%
- 1987: 3%	- 1990: 6%
- 1988: 4%	- 1991: 6%

INPUT®

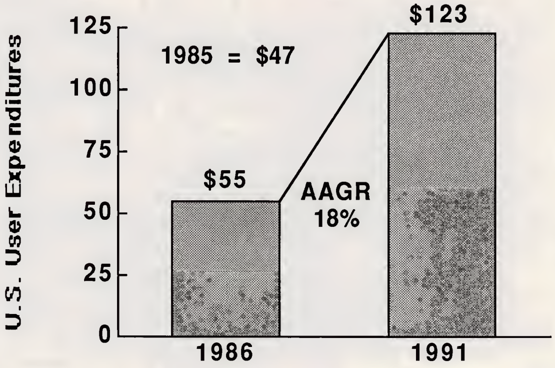
MARKET FORECASTS

INFORMATION SERVICES INDUSTRY: DRIVING FORCES

- **Systems as Competitive Edge**
- **Implementation Bottleneck**
- **Saturation Towards End of Decade**

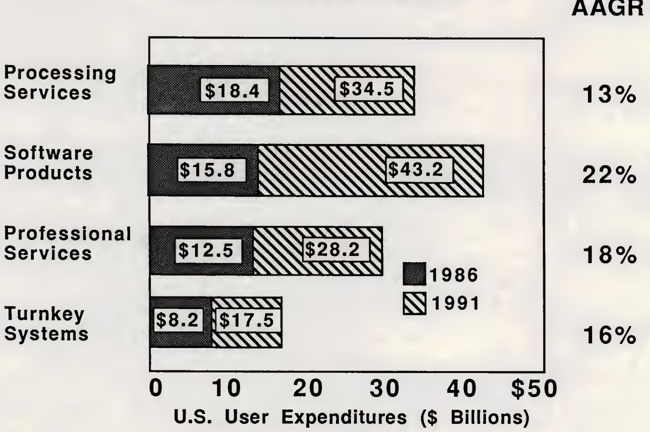
INPUT®

INFORMATION SERVICES MARKET
($ Billions)



7JJJJBDJz(s)29

INFORMATION SERVICES INDUSTRY BY DELIVERY MODE



8 JJJJ BD S (s) 31

"HOT" VERTICALS BY AAGR: USER EXPENDITURES

	$ Billions			PERCENT AAGR
	1985	1986	1991	
Medical	$1.7	$2.1	$5.9	23%
Discrete Manufacturing	$2.8	$3.4	$9.0	22%
Telecommunications	$0.6	$0.7	$1.9	22%

"HOT" VERTICALS BY 1991 SIZE: USER EXPENDITURES

	$ Billions			Percent AAGR
	1985	1986	1991	
Banking/Finance	$4.9	$5.8	$12.5	17%
Discrete Manufacturing	$2.8	$3.4	$9.0	22%
Medical	$1.7	$2.1	$5.9	23%

10JJJJ BD S (s) 11

INPUT®

PROCESSING/ NETWORK SERVICES

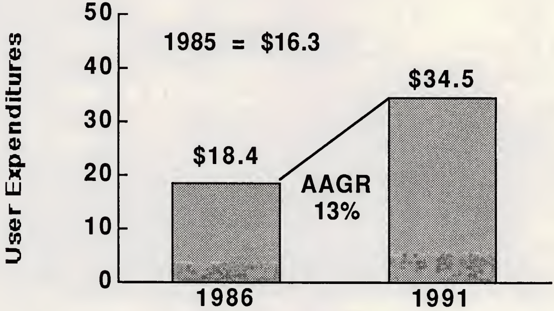
11 JJJJ BD S (s) 6

[illegible]

[illegible]

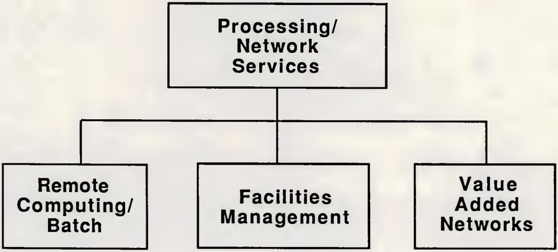
INPUT®

PROCESSING/NETWORK SERVICES MARKET
($ Billions)



12JJJJBDJz(s)28

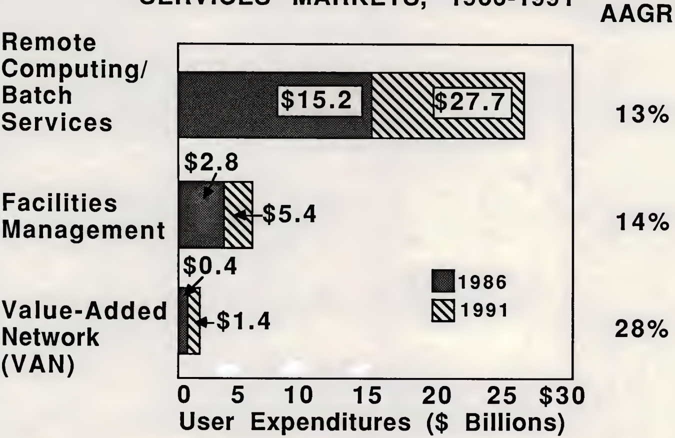
PROCESSING/NETWORK SERVICES MARKETS



13 JJJJ BD 15 S (s)

INPUT®

PROCESSING/NETWORK SERVICES MARKETS, 1986-1991



14 JJJJ BD S (s) 30

PROCESSING/NETWORK SERVICES: DRIVING FORCES

- Decrease in Hardware Prices

+ EDI

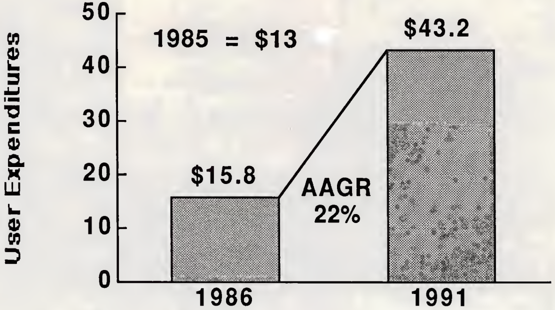
+ On-Line Data Base Segment Strong

+ Niche Opportunities

SOFTWARE PRODUCTS

INPUT®

SOFTWARE PRODUCTS MARKET
($ Billions)



17 JJJJBDJz(s)27

SOFTWARE PRODUCTS MARKET: DRIVING FORCES

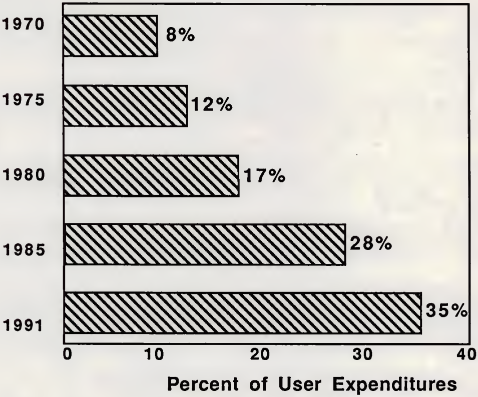
+ Hardware Base Increase

+ Drive to Connectivity

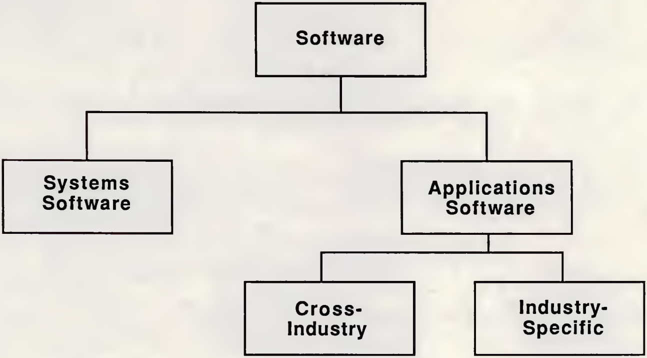
- Micro-Mainframe Confusion

+ Accelerated Obsolesence

SOFTWARE PRODUCTS PORTION OF INFORMATION SERVICES 1970-1991

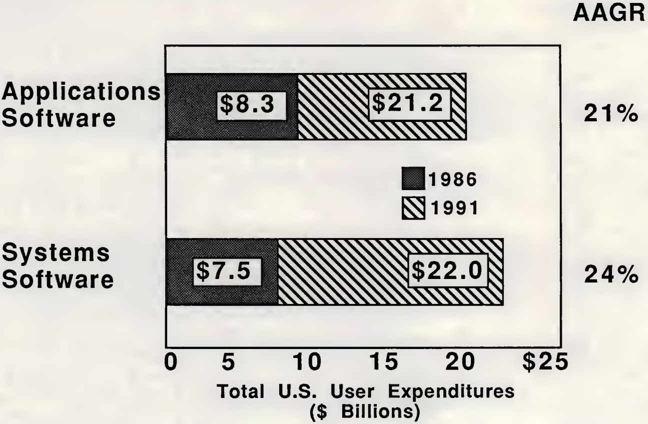


SOFTWARE MARKET STRUCTURE

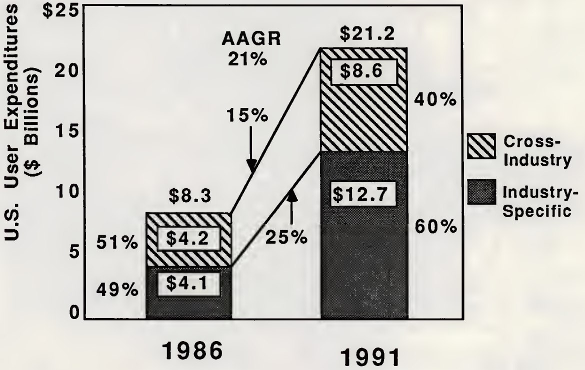


20JJJJ BD S (s) 13

SOFTWARE PRODUCTS MARKETS

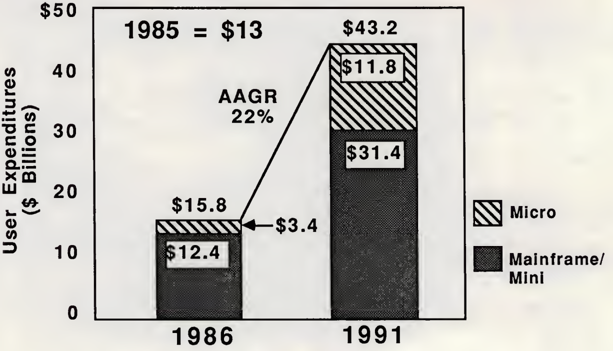


INDUSTRY-SPECIFIC APPLICATIONS SOFTWARE TO INCREASE SIGNIFICANTLY



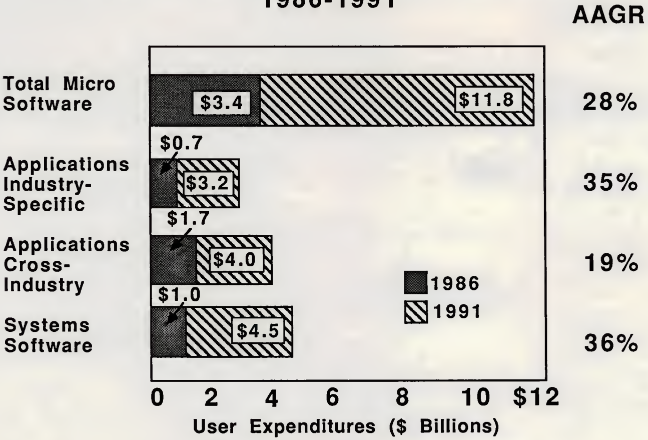
22 JJJJBD S(s) 22

SOFTWARE PRODUCTS MARKET FORECAST, MAINFRAME/MINI AND MICRO: 1986-1991



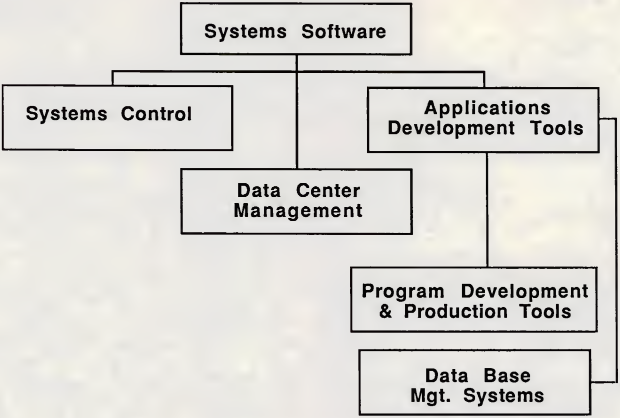
23 JJJJBD S(s) 20

STRONG MICRO SOFTWARE MARKET 1986-1991

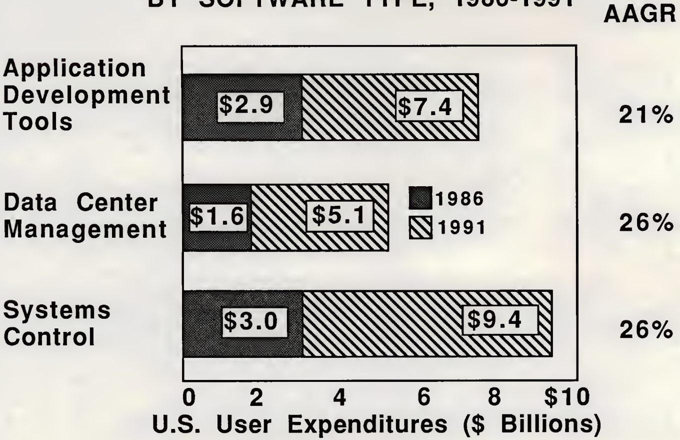


24 JJJJ BD S (s) 36

SYSTEMS SOFTWARE PRODUCTS MARKET STRUCTURE



TOTAL SYSTEMS SOFTWARE MARKET BY SOFTWARE TYPE, 1986-1991

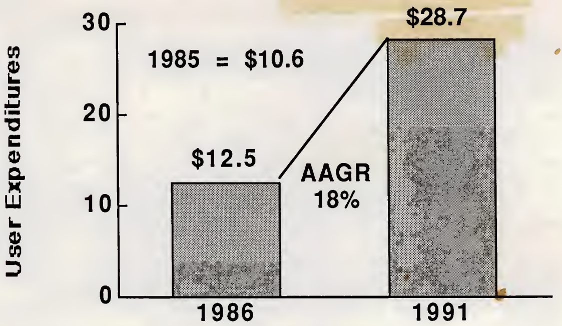


INPUT®

PROFESSIONAL SERVICES

Notes

PROFESSIONAL SERVICES MARKET
($ Billions)

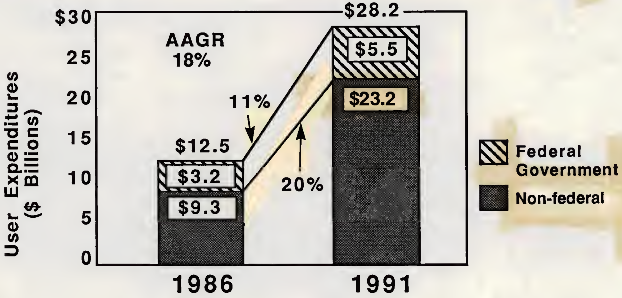


28JJJJBDJz(s)26

PROFESSIONAL SERVICES: DRIVING FORCES

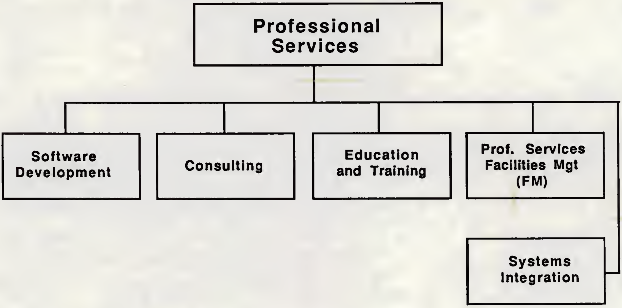
- \- More User Willingness to Compromise on Uniqueness
- \+ More Software Product Related
- \+ More Focus on Internal Productivity
- \+ Increased Industry Specialization
- \+ Federal Government Vendors Becoming Commercial Vendors

FEDERAL GOVERNMENT/NON-FEDERAL PROFESSIONAL SERVICES MARKETS



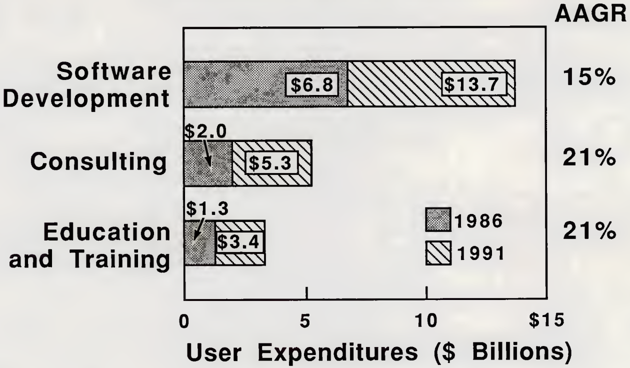
30JJJJBD S(s) 21

PROFESSIONAL SERVICES MARKET STRUCTURE



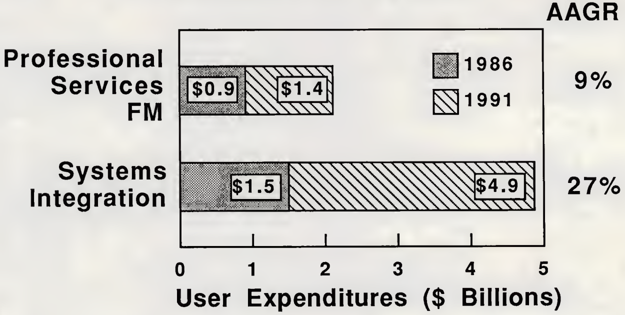
31JJJJ BD S (s) 12

PROFESSIONAL SERVICES MARKET BY MODE



32JJJJ BD J(s) 35

PROFESSIONAL SERVICES MARKET BY MODE



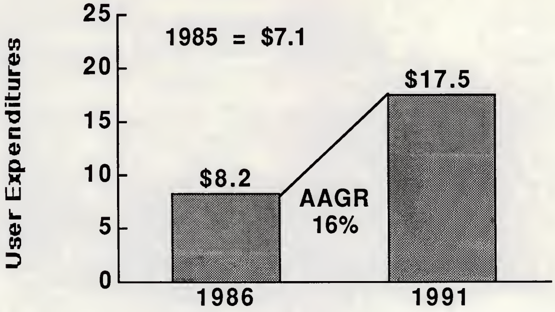
33JJJJ BD J (s) 34

INPUT®

TURNKEY SYSTEMS

INPUT®

TURNKEY SYSTEMS MARKET
($ Billions)



35JJJJBDJz(s)25

TURNKEY SYSTEMS: DRIVING FORCES

+ Increase in Range and Complexity of Computing Choices

+ Standard Hardware

- Rapid Obsolescence of Products

+ VAR Approach

INPUT®

VENDORS MISPERCEIVING USER ATTITUDES

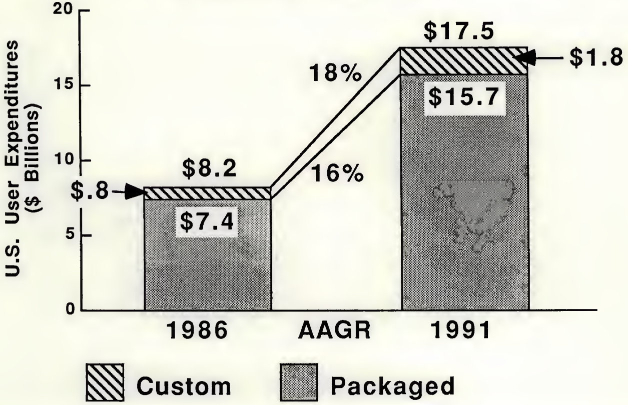
Buying Criteria	User Perception	Vendor Perception
Breadth of Applications Software	A	C
Flexibility of Applications Software	A	C
Scope of Software Not Reduced in Future Releases	A	C
Price	C	A

Buying Criteria

Quality ← User Perception

Vendor Perception → Price

CUSTOM VS. PACKAGED TURNKEY SYSTEMS MARKET, 1986-1991



JJJJ BD J(s) 36b

CONCLUSIONS

- Slowdown Temporary
- Greater User Sophistication

INFORMATION SERVICES

- **Rate of Change Is Accelerating**

  - **Products**
  - **Technology**
  - **Market Strategy**
  - **Vendor Complexion**

EMERGING NETWORK DIRECTIONS

SERVICE	CHARACTERISTICS
Virtual Private/ Software Defined Networks	Cost-Effective, Shared Network with User Management Features
ISDN	Promises Universal Services, with Bandwidth on Demand
Fiber Optics	High Capacity Links, Currently Offered on a Bulk Basis
FM-SCA	Uses Satelites and FM Radio Station Subcarriers for Broadcast Data Applications
Mobile Satellite	Depending on FCC Approval of Specific Vendors, Will Offer Cellular-Like and Rural Services

JJJJ BD S15a (s)